Emerging Themes Regarding Customer Perception of a Third-Party Online Food Delivery Provider and the Implications for Operators

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Shiang-Lih Chen McCain
Jeff Lolli
Emma Liu

ABSTRACT

This study discusses third-party online food delivery providers' (OFDPs) continuing dominance post-pandemic and provides recommendations for providers and foodservice operators by analyzing customer comments regarding a third-party OFDP. Thematic Analysis, a data-driven inductive approach, was applied in this study to identify four emergent themes. 1) App Technology-Oriented Quality Attributes, 2) App Service-Oriented Quality Attributes, 3) Delivery Person's Performance, and 4) Restaurant Food Quality. Technology-Oriented Quality Attributes had the highest frequency of mentions (533), followed by Deliverer’s Performance (531), Service-Oriented Quality Attributes (524), and Restaurant Food Quality (115) for a total of 1,703 mentions of which 461 (27%) were positive and 1,242 (73%) negative. Theme 1 had the highest percentage of negative comments at 86%, followed by Theme 2 at 85%, Theme 4 at 77%, and Theme 3 at 48%, the only surfaced theme that did not have more negative than positive comments.

Keywords: Third-party online food delivery providers, Food service establishments, Customer perception, Application technology attributes, application service attributes, Delivery person’s performance, Food quality

INTRODUCTION

Food delivery services grew substantially during the Pandemic (Chen McCain et al., 2022). Approximately 47% of individuals do not prepare their meals and purchase them elsewhere, Furthermore, one in three, or 31% of the time food is delivered to homes (Kantar, 2022). Rakuten Insight’s Survey found that third-party online food delivery providers (OFDPs) are still very popular with 74% of respondents still ordering food online through a delivery service today even though customers have the option of dining in an establishment. (Blazyte, 2023). While third-party OFDPs were around pre-pandemic, their business exploded out of necessity during the pandemic and has now become part of the landscape of how customers get their food.
Even though restaurants and foodservice establishments have “normalized” their operations, third-party OFDPs provide an option for these businesses to increase revenue. This increased revenue shows no sign of slowing down as this market is expected to show an annual growth rate of 12.67%, from 2023 to 2027 resulting in a projected market volume of 1.65 trillion by 2027. The number of expected users will increase to 2.45 billion by 2027 (Statista, 2023).

When dining in a restaurant or foodservice establishment, customers have the opportunity to evaluate and review both the food and service experience. As more individuals continue to use third-party OFDPs, in addition to knowing OFDPs from traditional word-of-mouth, customers mainly use online reviews to determine service levels since, unlike an in-person dining experience, the food consumed and service experienced do not occur simultaneously in real-time. Since customers are relying more on these electronic reviews, it is important to review and evaluate comments and ratings on an ongoing basis and address them where appropriate (Matt, 2017). Many of the third-party OFDPs now allow customers to provide feedback and reviews directly in the app. For example, Uber Eats uses a rating scale of one to five stars while also allowing comments on the rating given directly in the app. Customers also have the option to give a “thumbs up/thumbs down” type of rating on both the delivery service and the menu item(s) ordered (Total Food Service, 2022). Analyzing customer comments and ratings for third-party OFDPs' strengths and weaknesses is important in maintaining a positive relationship between providers and restaurants.

Several studies have evaluated the growth of the usage of food apps (Chen McCain et al., 2022; Belarmino et al., 2021; Dirsehan & Cankat, 2021; Jun et al., 2022; Kumar & Shah, 2021; Mehrolia et al., 2020) (Table 1). Most of these previous studies evaluated the use of food apps only with pre-established theoretical frameworks. However, due to the rapidly increasing and ever-changing use of these apps, an established theoretical framework may not capture all the aspects of food apps. Additionally, the uniqueness of the pandemic may have created a ‘new reality’ that could have a changing impact on consumer perceptions and attitudes (Berbekova et al. 2021; Zenk & Kock, 2020). Therefore, this study applied a different data analysis method to evaluate the consequences of COVID-19 and based on the results, provides managerial implications for both foodservice establishments and OFDPs as food delivery continues to grow post-pandemic.

BACKGROUND

The Pandemic was an unprecedented event that not only impacted people’s lives but many industries as well. Particularly, the impact on the foodservice industry was swift and dramatic. Due to local and state regulations, many foodservice providers and businesses were forced to close in-dining operations and had to completely shift their business models to continue operations. In most cases, customers only had the option to carry-out or have food delivered. Even carry-out became a challenge with social distancing requirements and other restrictions, etc. Thus, since few options existed, delivery became a critical way to get food outside of the home. Customers started to rely on the use of third-party OFDPs not out of convenience, but out of necessity. Furthermore, many foodservice providers are small businesses that cannot afford to hire delivery drivers, thus they heavily rely on partnering with third-party delivery providers to get their food to customers. Due to this necessity, customers had to accept this status quo, regardless of how well third-party delivery providers performed. Therefore, it is reasonable to suspect consumer behavior may have been different due to the governmental restrictions placed on foodservice providers during this trying time.

Due to this unique situation in time, it was important to explore customer perceptions toward food delivery providers directly from their comments to determine if different themes might emerge instead of following a pre-established theoretical framework where comments would be required to be placed into an existing structure. According to Taylor and Ussher (2001), “themes do not just lie about waiting to be discovered, they do not simply emerge, but must be actively sought out” (p. 310). Thematic Analysis is a qualitative method that can “reflect reality and unpack or unravel the surface of reality” (Braun & Clarke, 2006, p. 81). This methodology is appropriate when the condition is “subject to social, cultural, and temporal variations” (Walters, 2016, p. 108). There were certainly social, cultural, and temporal alterations during the pandemic and while consumers may have chosen a third-party OFDP out of necessity, today, the environment is ever-changing. Both third-party OFDPs, as well as foodservice establishments, need to understand what is important to consumers on an ongoing basis to remain competitive.
Qualitative research can be applied to uncover “meaning in particular circumstances and contexts” (Maguire & Delahunt, 2017, p. 3351). Thematic analysis is a commonly applied qualitative method used to analyze existing data to discover hidden patterns and identify underlying themes allowing the meanings and implications to provide clarity for a phenomenon under investigation (Berbekova et al., 2021; Braun & Clarke, 2006; Walter, 2016). Bree and Gallagher (2016) found that themes that emerge can be identified semantically (surface meaning in the data analyzed) or latent (underlying concepts/themes identified in the data analyzed). In the study, themes were analyzed semantically in descriptive form followed by latently looking beyond the surface to identify themes/patterns that emerged during data analysis.

METHODOLOGY

Data Collection

Analyzing user-generated content on social media has been extensively applied to assess consumers’ attitudes, opinions, perceptions, emotions, feelings, and assessments of different brands, products, and/or services (Ho et al., 2020; Luns-Nevarez, 2021; Metha & Pandya, 2020; Mulyani et al., 2024). Particularly, evaluating customers’ reactions to social media platforms can discover phenomena that “have not been theoretically addressed but are discussed in society” (Mulyani et al., 2024, p. 2).

One thousand customer comments posted on the Taiwan Uber Eats Google Play App from April 1st to June 30th, 2020, were analyzed in this study. There are two major third-party OFDP apps in Taiwan: Food Panda and Uber Eats (Blazyte, 2023). Although Food Panda has a higher market share, Food Panda was perceived to be superior to Uber Eats in only one criterion: price. Therefore, guest comments on Food Panda regarding price disproportionately outweighed comments on other aspects such as service. Furthermore, Uber Eats was perceived to perform better in terms of service, completeness of items delivered, and delivery speed. Therefore, guest comments on Uber Eats are more evenly distributed among different aspects (Baixuan, 2020). To evaluate all possible aspects of the food delivery phenomenon, Uber Eats was selected. All the comments were copied and pasted into an Excel spreadsheet for analysis.

Data Analysis

As indicated by Zeithaml et al., (2020), an inductive approach is appropriate when the researchers’ primary intention is to explore underlying reasons for the meanings from data. Hence, an inductive approach was applied in this study following the six steps (familiarization of the data, generation of initial codes, searching for themes, reviewing themes, defining naming of themes, and producing a report) of thematic analysis proposed by Braun and Clarke (2006) to identify the underlying themes (Figure 1).

Figure 1. Six Steps of Thematic Analysis

<table>
<thead>
<tr>
<th>Phase</th>
<th>Description of the process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarizing yourself with your data:</td>
<td>Transcribing data (if necessary), reading and re-reading the data, and noting down initial ideas.</td>
</tr>
<tr>
<td>2. Generating initial codes:</td>
<td>Coding interesting features of the data systematically across the entire data set, collating data relevant to each code.</td>
</tr>
<tr>
<td>3. Searching for themes:</td>
<td>Collating codes into potential themes, gathering all data relevant to each potential theme.</td>
</tr>
<tr>
<td>4. Reviewing themes:</td>
<td>Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic ‘map’ of the analysis.</td>
</tr>
<tr>
<td>5. Defining and naming themes:</td>
<td>Ongoing analysis to retain the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.</td>
</tr>
</tbody>
</table>
Due to the nature of thematic analysis where there is no pre-established theoretical framework, the coding method is emergent where the categories are established based on the examination of the data to generate a set of attributes serving as the coding scheme for the process (Stemler, 2000). This coding process and theme identification were performed manually by trained Graduate Assistants (GAs) through a repeated and active reading of each guest comment. After familiarization with the data and the initial inspection, the GAs proceeded with coding and theme identification. The GAs, fluent in Mandarin and English, read through all of the Taiwanese reviews for familiarization with the data for translation into English. To improve understanding and gain initial knowledge from the extracted reviews, the GAs began recording ideas/comments in an Excel spreadsheet. Data were then coded to determine the repetitiveness of data and emerging themes. The GAs looked through the coded text segments generated for prominent themes in the text, which were then categorized into prospective themes (grouping fragmented data to find commonality). Final themes were named and defined with criteria for each overarching theme that surfaced. This thematic analysis ended with a summary visualization of the thematic network. Figure 2, The Thematic Map, provides a clearer representation of the four emerging themes.

After the emerging themes were identified. Further evaluations were conducted to determine the frequency of the mentioning of the key attributes as a feature extraction (Table 2) and reviews were divided into positive and negative for the sentiment polarity to gauge customers’ sentiment toward the third-party OFDP app (Table 3) (Schucker et al., 2015; Wankhade et al., 2022).
FINDINGS

The study has a satisfactory .97 inter-coder reliability. According to Kassarjian (1977), an analysis is reliable when inter-coder reliability is higher than 0.85. Additionally, the trustworthiness of the study results was enhanced by following the 15-point checklist of criteria for good thematic analysis proposed by Braun and Clarke (2006). The results of the thematic analysis revealed the following four themes 1) App Technology-Oriented Quality Attributes, 2) App Service-Oriented Quality Attributes, 3) Delivery Person’s Performance, and 4) Restaurant Food Quality. Figure two, the Thematic Map, defines the framework of each theme.

Table one lists the frequency of mentioning of the Technology-Oriented Quality Attributes, Service-Oriented Quality Attributes, Delivery Person’s Performance, and Restaurant Food Quality. Within the 1,703 total mentions, Technology-Oriented Quality Attributes had the highest frequency of mentions at 533, followed closely by 531 mentions regarding Delivery Person’s Performance, 524 mentions regarding Service-Oriented Quality Attributes, and 115 mentions regarding Restaurant Food Quality.

Table 1. Frequency of Mentioning of Technology-Oriented Quality Attributes, Service-Oriented Quality Attributes, Delivery Person’s Performance, and Restaurant Food Quality

<table>
<thead>
<tr>
<th>Themes &amp; Category</th>
<th>Example</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grand Total</strong></td>
<td></td>
<td>1,703</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Theme 1: Technology-Oriented Quality Attributes</strong></td>
<td></td>
<td>533</td>
<td>31.3%</td>
</tr>
<tr>
<td>Apps usage</td>
<td>App ease of usage</td>
<td>251</td>
<td></td>
</tr>
<tr>
<td></td>
<td>App crashed frequently</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The system is unstable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Account</td>
<td>Setup difficulty</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Modification issue</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Payment issue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tipping</td>
<td>1. Setup issue</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Navigation</td>
<td>Ease of delivery tracking</td>
<td>107</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Delivery tracking is not accurate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Navigation cannot locate the address</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apps customer support center information</td>
<td>1. The app does not customer support contact information, chat, text, or phone number</td>
<td>70</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. The app indeed provides customer support contact information but very difficult to find that information</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Theme 2: Service-Oriented Quality Attributes</strong></td>
<td></td>
<td>524</td>
<td>30.8%</td>
</tr>
<tr>
<td>Prices/fees</td>
<td>1. Hidden fees or change extract as indicated in apps</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. The order is canceled but still charged</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sufficient restaurant options</td>
<td>1. Sufficient restaurant options</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Refund</td>
<td>1. No refund</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Time to take to receive the refund</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Ease of procedure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>1. When the customers should be informed by the app's automatic system and the apps fail to inform customers</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Apps customer support center employees</td>
<td>1. Customers contact the customer support center but do not receive any response or the response is very slow</td>
<td>217</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Attitude</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Problem-solving</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotion</td>
<td>1. Coupons and discounts issue</td>
<td>139</td>
<td></td>
</tr>
</tbody>
</table>
### Theme 3: Delivery Person’s Performance

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Positive</th>
<th>% of Total</th>
<th>Negative</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliver’s communication</td>
<td></td>
<td></td>
<td>531</td>
<td>31.2%</td>
</tr>
<tr>
<td>1. Customers are not informed of the delivery process by the driver</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contactless delivery</td>
<td></td>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>1. The deliveries follow the contactless instruction</td>
<td></td>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Delivery Time</td>
<td></td>
<td></td>
<td>294</td>
<td></td>
</tr>
<tr>
<td>1. No show</td>
<td></td>
<td></td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>2. Late</td>
<td></td>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>3. On-time</td>
<td></td>
<td></td>
<td>281</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td></td>
<td></td>
<td>186</td>
<td></td>
</tr>
<tr>
<td>1. Reliable</td>
<td></td>
<td></td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>2. Friendly/polite</td>
<td></td>
<td></td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>3. Professional</td>
<td></td>
<td></td>
<td>432</td>
<td></td>
</tr>
</tbody>
</table>

### Theme 4: Restaurant Food Quality

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Positive</th>
<th>% of Total</th>
<th>Negative</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>115</td>
<td>6.7%</td>
<td>1242</td>
<td>73%</td>
</tr>
<tr>
<td>Ordering</td>
<td></td>
<td></td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>1. Incomplete/messed up order</td>
<td></td>
<td></td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>2. Wrong order</td>
<td></td>
<td></td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>Food quality</td>
<td></td>
<td></td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>1. Temperature</td>
<td></td>
<td></td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>2. Taste</td>
<td></td>
<td></td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Value for money</td>
<td>1. Price/value of money</td>
<td>8</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Created by Authors*

Table two lists the positive and negative perceptions of the Technology-Oriented Quality Attributes, Service-Oriented Quality Attributes, Delivery Person’s Performance, and Restaurant Food Quality. Within the 1,703 total mentions, 461 were positive and 1,242 negative, or 27% positive, and 73% negative. With the four surfaced themes, Technology-Oriented Quality Attributes had the highest percentage of negative comments at 86%, followed by Service-Oriented Quality Attributes at 85%, Restaurant Food Quality at 77%, and Delivery Person’s Performance at 48%. The only surfaced theme that did not have more negative than positive comments was the Delivery Person’s Performance.

<table>
<thead>
<tr>
<th>Themes</th>
<th>Positive</th>
<th>% of Total</th>
<th>Negative</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>461</td>
<td>27%</td>
<td>1242</td>
<td>73%</td>
</tr>
<tr>
<td><strong>Theme 1: Technology-Oriented Quality Attributes</strong></td>
<td>76</td>
<td>14%</td>
<td>457</td>
<td>86%</td>
</tr>
<tr>
<td>Apps usage</td>
<td>34</td>
<td>14%</td>
<td>217</td>
<td>86%</td>
</tr>
<tr>
<td>Account</td>
<td>1</td>
<td>.01%</td>
<td>93</td>
<td>99.9%</td>
</tr>
<tr>
<td>Tipping</td>
<td>3</td>
<td>27%</td>
<td>8</td>
<td>73%</td>
</tr>
<tr>
<td>Navigation</td>
<td>38</td>
<td>36%</td>
<td>69</td>
<td>64%</td>
</tr>
<tr>
<td>Apps customer support center information</td>
<td>0</td>
<td>0%</td>
<td>70</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Theme 2: Service-Oriented Quality Attributes</strong></td>
<td>81</td>
<td>15%</td>
<td>443</td>
<td>85%</td>
</tr>
<tr>
<td>Price/fees</td>
<td>4</td>
<td>6%</td>
<td>62</td>
<td>94%</td>
</tr>
<tr>
<td>Sufficient restaurant options</td>
<td>0</td>
<td>0%</td>
<td>4</td>
<td>100%</td>
</tr>
<tr>
<td>Refund</td>
<td>7</td>
<td>16%</td>
<td>36</td>
<td>84%</td>
</tr>
<tr>
<td>Communication</td>
<td>9</td>
<td>16%</td>
<td>46</td>
<td>84%</td>
</tr>
<tr>
<td>Apps customer support center employees</td>
<td>11</td>
<td>5%</td>
<td>206</td>
<td>95%</td>
</tr>
<tr>
<td>Promotion</td>
<td>50</td>
<td>36%</td>
<td>89</td>
<td>64%</td>
</tr>
<tr>
<td><strong>Theme 3: Delivery Person’s Performance</strong></td>
<td>277</td>
<td>52%</td>
<td>254</td>
<td>48%</td>
</tr>
</tbody>
</table>
DISCUSSION

Within the four themes, Technology-Oriented Quality Attributes, Service-Oriented Quality Attributes, and the Delivery Person’s Performance had nearly the same frequency of mentioning. Within these three surfaced themes, Technology-Oriented Quality Attributes and Service-Oriented Quality Attributes had nearly the same higher percentage of negative comments, whereas the Delivery Person’s Performance had a higher percentage of positive comments. Restaurant Food Quality had a significantly lower frequency of mentioning but had a fairly high percentage of negative comments.

Theme 1. App Technology-Oriented Quality Attributes

Within the Technology-Oriented Quality Attributes, App Usage, Navigation, and Account Setup had the highest frequency of mentions. All attributes within this theme had more negative than positive comments. Customers had a negative perception of the frequent crashing of the app, its instability, the GPS inaccuracy, and the ease of account setup. It is important to remember that not all customers may be tech-savvy and if the app is difficult to set up and navigate, users may become frustrated and therefore may not consider the Technology-Oriented Quality Attributes of the app to be user-friendly.

Theme 2. Service-Oriented Quality Attributes

Within the Service-Oriented Quality Attribute, the App Customer Support Center Employees' Service Quality, Promotions for Coupons/Discounts, and Price/Fees had the highest frequency of mentions. All attributes within this theme had more negative than positive comments. Customers had a negative perception of Customer Support Center Employees' attitude, ability to solve problems, response time, ease of applying coupons/promotions, hidden fees, and cancellation of an order while still being charged. Should a customer call the support center, they want an employee to be able to resolve their concerns efficiently and expeditiously. They also want to be able to easily apply coupons/promotions to their order and do not want any hidden fees.

Theme 3. Delivery Person’s Performance

Within the Delivery Person’s Performance, delivery time, and attitude had the highest frequency of mentions. Within these attributes, customers had a more positive than negative perception of the delivery person’s performance. Customers had a more negative perception of the delivery person’s communication, such as not informing them that their food was delivered. They want to know of any problems while their food is in the process of delivery and when their food has been delivered, especially in the case of contactless deliveries to avoid food sitting outside for an extended period and thus affecting temperature or quality.

Theme 4. Restaurant Food Quality
Within Restaurant Food Quality, ordering and food quality had the highest frequency of mentions. Within these attributes, customers had a more negative than positive perception of receiving an incomplete or incorrect order. They want to be assured that their order is checked and verified for accuracy and completeness before leaving the foodservice establishment. No one wants to receive missing items from their order or even the wrong order since it will take time to have missing items or the correct order delivered, unlike an in-person dining experience where these issues can be rectified immediately. However, customers had a more positive than negative perception of food quality whereas they were split equally on the value for the money.

THEORETICAL IMPLICATIONS

From reviewing customer comments, this study identified the four themes that influence customer experience concurrently. The result of this study revealed that a food delivery service is impacted by the app used, the restaurant, and the delivery person. Therefore, those four themes should be investigated simultaneously instead of separately. To the authors’ knowledge, the most recent literature on third-party OFDPs examined the aforementioned four themes partially. For instance, some studies evaluated only the food app’s perspective. For instance, Mehrolia et al. (2020) applied the Health Belief Model to analyze factors (i.e. perceived threats and perceived benefits, affective and instrumental beliefs) influencing customer reaction to third-party OFDPs. Kumar and Shah (2021) assessed the relationship between third-party OFDP apps and customer emotion and usage intention. Jun et al. (2022) evaluated how customers’ level of technology acceptance, trust, enjoyment, and social influence impacted their use of third-party OFDPs.

Additionally, App Technology and Restaurant Food Quality were examined in Belarmino et al. (2021) and Dirsehan and Canka (2021) studies. Belarmino et al. (2021) investigated the relationship between customers’ Mobile Food Ordering Apps (MFOA) usage, MFOA satisfaction, restaurant brand satisfaction, and restaurant brand loyalty. Dirsehan and Canka (2021) compared the relationship between customers’ Online Meal Delivery Platforms (OMDP) usage, restaurant food quality, and customers’ overall satisfaction before and during the quarantine.

Moreover, as aforementioned, the Pandemic caused drastic social and cultural changes where many restaurants’ dine-in areas were closed and carry-out and delivery were the only choices during that specific time. Therefore, the authors were uncertain if customers’ needs, wants and perceptions differed during this unconventional situation. Hence, this study applied thematic analysis to analyze guest comments without considering a pre-determined theoretical framework. The results confirmed that the evaluation items in Chen McCain et al. (2022) also reflected the four themes identified in this study. Table three is a summary of previous research on the growth of the usage of food apps.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Purpose of Study</th>
<th>Antecedents</th>
<th>Consequences</th>
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</table>
| Belarmino et al. (2021)  | Applying the Expectation confirmation theory to compare satisfaction with Online Meal Delivery Platforms (OMDP) before quarantine and during quarantine | • Sharing economy ethos  
• Price-value  
• Food quality  
• Service speed  
• Perceived ease of use  
• Confirmation of beliefs | Customer satisfaction |
| Chen McCain et al. (2022)| Evaluating contributing factors influencing customer satisfaction toward third-party (Food Delivery Apps) FDA | • Food delivery application  
• Product Quality  
• Service Quality | Customer satisfaction |
| Dirsehan & Canka, (2021) | Examining the relationship between (Mobile food ordering apps (MFOA) usage, MFOA satisfaction, restaurant brand satisfaction, and restaurant brand loyalty | • MFOA usage  
• MFOA satisfaction  
• Restaurant brand satisfaction | Restaurant Brand Loyalty |
| Jun, et al., (2022)      | Applying the Technology Acceptance Model (TAM) to evaluate customers’ online food delivery app usage intention | • Perceived usefulness  
• Perceived ease of use  
• Enjoyment | Behavior intention |
<table>
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<tr>
<th>Source: Created by Authors</th>
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<table>
<thead>
<tr>
<th>Authors</th>
<th>Methodology</th>
<th>Findings</th>
<th>Variables</th>
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</thead>
<tbody>
<tr>
<td>Kumar &amp; Shah (2021)</td>
<td>Applying the Pleasure Arousal Dominance (PAD) framework to evaluate customers’ continuous online food delivery app usage intention</td>
<td>Trust, Social influence, Attitude</td>
<td>Aesthetic appeal, Aesthetic formality, Dominance, Pleasure, Arousal</td>
</tr>
<tr>
<td>Mehrolia, et al. (2020)</td>
<td>Applying the Health Belief Model to examine factors influencing customers who did and did not order food through Online Food Delivery services (OFDs).</td>
<td>Perceived Threat, Perceived Benefits, Affective and Instrumental beliefs, Cues to action &amp; product involvement, Age &amp; Purchase Frequency</td>
<td>Self Protective Behavior (Did/did not order food)</td>
</tr>
</tbody>
</table>

However, Chen McCain et al. (2022) examined how the three antecedents (food delivery applications, product quality, and service quality) influenced customer satisfaction toward third-party food delivery apps. While using different data analysis methods, the results presented similar items, but from two different angles. Chen McCain et al. (2022) classified the items from researchers’ perspectives by following a pre-determined theoretical framework; on the other hand, in this study, items were grouped from customers’ perspectives by analyzing guest comments directly without considering a pre-determined theoretical framework.

First, Chen McCain et al. (2022) grouped all food delivery application items under the same dimension. In this study, the technical-oriented quality attributes and service-oriented quality attributes were separated into two distinctive themes which improved clarity and understanding. By reviewing guest comments, it is clear that the apps’ technical attributes and service attributes are completely different issues and should be treated individually. From the customers’ usage perspective, Theme 1 - Technology-Oriented Quality Attributes are related to the design of the apps, such as ease of navigation and system stability. On the other hand, Theme 2 - Service-Oriented Quality Attributes are related to other app features that are not related to technology, such as hidden fees and restaurant options.

Second, service quality is one of the three antecedents in Chen McCain et al. (2022)’s theoretical framework. Chen McCain et al. (2022) defined service quality to be the interactions between customers and employees and followed that definition by grouping both the interactions between customers and delivery persons and also customers and the apps customer support employees into the same dimension. However, by reviewing guest comments, it is obvious that customers’ perceptions are divided by the service provider. For instance, customers’ perceptions of the app’s support center employees are completely unrelated to their perceptions of the delivery person. Therefore, in this study, these two different interactions were classified into two individual themes which improved clarity and understanding.

When researchers follow the pre-determined model to categorize guest comments, the starting point is based on theory; on the other hand, when researchers explore the contents embedded in guest comments, the starting point is based on genuine customer perception. Therefore, the results of this study advance academic theory by analyzing guest comments through a different lens.

**MANAGERIAL IMPLICATIONS**

**Recommendations for OFPDs/App Managers**

“With unprecedented challenges faced by the hospitality industry in the post-COVID-19 era, hospitality scholars are expected to shift their research focus to develop solutions for the industry” (Gursory & Chi, 2020, p. 527). Therefore, this study analyzed third-party OFDP app customer comments to determine surfaced themes and to provide practical
implications and recommendations for both third-party OFDPs and foodservice establishments as they adapt their business models post-pandemic to respond to the increased use of third-party OFDP apps.

According to Blose, Tankersley, and Flynn (2005), when managing service quality, existing limitations must be taken into account. Attempting to maximize performance in all areas by increased resource allocation can eventually result in diminishing returns, thus it is not feasible to address all areas of service quality simultaneously. A more effective and efficient approach may be to differentiate those dimensions that are more important and impactful to overall service quality and prioritize and reallocate resources from less important areas to those that will have a greater impact and return on investment (ROI). “By focusing on the most important areas, the organization is more likely to efficiently and effectively provide a service that more accurately meets customers’ needs and desires while at the same time maximizing the organization’s goals” (Blose, Tankersley, and Flynn, 2005, p. 17).

This can be accomplished through Voice of Customer (VoC) market research or through market surveys to get more detailed information on customers (Gell, 2021). Third-party OFDPs can look at their competitors through a mystery shopping program to stay ahead of the competition and look at KPIs such as wait times, quality of food once delivered, food and fee costs, overall customer service, and customer expectations (Gell, 2021). Third-party OFDP employees can shop themselves to evaluate the app as well as service areas such as driver friendliness, accuracy and timeliness of orders, and food temperature. This approach allows the company to see things through the eyes of its customers (Gell, 2021). This would allow a third-party OFDP to capitalize on its strengths while working on areas where competitors are doing better.

Thus, this study indicated that the Technology-Oriented and Service-Oriented Quality Attributes of the third-party OFDP app are the top two important factors regarding the customers’ experience. Since foodservice operators have multiple third-party OFDP app providers to choose from, it is incumbent upon them to consistently inform these providers of customer concerns and expectations of app quality to encourage and reinforce ongoing quality improvement and enhancement by the App’s development team, prioritizing these two important quality areas.

The following are recommendations for all four themes. However, Theme 1: Technology-Oriented Quality Attributes and Theme 2: Service-Oriented Quality Attributes have the highest percentage of negative comments and because of this, Third-Party OFDPs should prioritize their efforts on improving overall app functionality to improve customer perception of app usage. After all, the app is the vehicle by which customers order food and if the app is challenging to use, customers could be turned off altogether. If customers cannot effectively and seamlessly order food on the app then focusing on improving negative comments in Theme 3 – Delivery Person’s Performance and Theme 4 – Restaurant Food Quality will not matter. It all has to start with the app and that is where the priority should be given initially to improve customer perception.

Moreover, app optimization is very important. If customers experience challenges with a third-party OFDP’s app they may decide to use another. User interfaces play a key role in any technology used by customers. The app needs to be straightforward, intuitive (ease of use), and reliable as this impacts the overall customer experience (Gell, 2021). Third-party OFDPs need to ensure an app’s stability and ease of use. The design should be user-friendly and consider that not every user may be “tech-savvy”. The app should be programmed to limit the number of steps it takes to add a payment method and to offer multiple payment methods (i.e. split credit cards or cash) and it should require the user to ensure their GPS is on before placing an order so the delivery person has the customers correct address. The app needs to allow multiple ways (chat, call, text) upfront to contact customer service for questions regarding an order, etc. Customer Support is important and thus, availability and resolving concerns promptly will improve overall customer satisfaction. This can be accomplished by having well-trained and knowledgeable employees who know how to handle customer complaints effectively and efficiently. Third-party OFDPs could create key performance indicators (KPIs) for the customer support center with benchmarks for responding to a customer. For example, if a customer files a complaint, they should hear a response within one business day. The process of applying a coupon should be made clear at checkout before payment.

A third-party OFDP needs to make it easy to provide feedback in the app. Every comment should be followed up. Complaints especially need to be addressed with a response from management and a service recovery issued if necessary. Total Food Service (2022) recommends that third-party OFDPs work with foodservice managers to
maintain a data-driven, delivery-only menu that maximizes quality control and keeps the menu evergreen and fresh to avoid outdated items, etc. In-app promotions can be used to attract new customers. Order tracking and prompts can garner data in a meaningful way which can help create more accurate wait times and understand reasons for missed or inaccurate orders. These data are also helpful to foodservice managers. Rai (2021) also recommends that within the competitive and growing third-party OFDP market, to stand out, app development needs to work in tandem and support physical food operations. It is important to have an easy registration process that also allows a customer to log in with a social media profile. The app interface should be simple and easy to navigate while allowing various sorting options such as food choices, dietary requirements, etc. Real-time delivery tracking is essential. Broad and secure payments such as credit/debit cards, wallet payments, and even cash on delivery should be offered. Even Artificial Intelligence (AI), can be used to choose which food items should be promoted for example.

**Recommendations for Foodservice Establishments**

It is important to have procedures in place for third-party OFDP and foodservice establishments to work together to ensure that customer orders are complete and accurate. Incorrect or problematic customer orders reflect negatively on all parties, regardless of where the problem lies. No matter where the mistake occurs, this shared problem requires shared solutions. For example, a foodservice establishment employee and deliverer should do a final check together before leaving to bring the order to the customer. Additionally, it is important to ensure food is packaged to maintain freshness, proper temperature, and presentation. Third-party OFDPs and foodservice establishments should list food preparation and delivery times clearly stated on the app so that customers can make informed decisions about food choices.

Additionally, the thematic analysis method applied in this study is intended to develop a feasible way for the industry to undertake a systematic evaluation of evolving trends so that business managers and owners can respond promptly (Xu & Zammit, 2020). This allows foodservice managers to discover the trends residing in guest comments for the following two reasons: 1) Since most owners and managers currently review guest comments for complaints, etc. as part of an overall customer service strategy, this feasible data collection method permits further thematic analysis of these comments that are already being populated into an Excel Spreadsheet (Excel is also actively used in the daily operation the business for others things such as inventory and financial analysis). 2) A flexible and theoretical free data analysis process since thematic analysis uncovers themes residing in the data without fitting it into a pre-determined theoretical framework. Thematic analysis is a “relatively easy and quick method to learn, and do” (Braun & Clarke, 2006, p. 97). It does not require the researcher to possess in-depth theoretical and technical knowledge (Braun & Clarke, 2006; Nowell et al., 2017).

Thus, the thematic analysis method is suitable for industry practitioners who have less research experience (Braun & Clarke, 2006). The research method executed in this study demonstrates that academic research can be applied to an industry's practical applications and by doing so, encourages academic research enthusiasm in applied fields (Schuckert, et al., 2015) such as the foodservice and delivery industries. Most foodservice establishments relying on the use of third-party OFDP Apps are small to medium-scale operations and thus, it is a challenge to justify the cost of text mining software such as TAKMI (Text Analysis and Knowledge Mining) (Nakayama & Wan, 2019) since the use is specific and narrow. Moreover, most operators are already comfortable using Microsoft Excel, which also has a wide range of uses in operations management. Using Excel is perceived to be a more sustainable and practical method to store and analyze data in an operation because it is less intimidating and more user-friendly.

Furthermore, AI’s ability to capture the true meanings of reviews is indeterminate and information garnered with text mining software is typically just a collection of keywords and may not give intended or desired results. (Schuckert et al., 2015). In this study, the comments were analyzed manually by GAs and thus, foodservice operators/managers might consider following the steps illustrated in this study to analyze guest comments. Many small to medium-scale foodservice operators/managers already monitor and respond to customer comments routinely. However, they may have not taken the time or they may not be aware that they actually can group the comments into different categories to systematically analyze these comments for trends and patterns. The thematic analysis method demonstrated in this study provides these operators with a possible alternative to discover emerging themes embedded in guest comments.
LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

This study has several limitations. First, only Google Play was used to garner the comments used in this study from Uber Eats. Future research might consider gathering comments from other platforms (i.e. Apple Store) and other companies (i.e. Foodpanda). Second, since the growth in third-party OFDPs is a worldwide phenomenon, the impact on various cultures could be different. Future research is recommended to collect data from different cultures to have a comprehensive understanding of emerging and changing consumer preferences and their impact on third-party OFDPs. Third, customers’ needs and wants evolve, and therefore future research is suggested to collect data consistently so that researchers can continuously discover the newly emerging themes in the file.

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**FOOTNOTE**

1 The Pandemic caused drastic social and cultural changes where many restaurants’ dine-in areas were closed and carry-out and delivery were the only choices during that specific time. Therefore, the authors were uncertain if customers’ needs, wants and perceptions differed during this unique situation. Hence, this study applied thematic analysis to analyze guest comments without considering a pre-determined theoretical framework.

The main difference between Chen McCain et al. (2022) and this manuscript is the methodology. In Chen McCain et al. (2022), a theoretical framework was established first, and then based on this pre-established theoretical framework’s model, guest comments were analyzed. In this manuscript, we applied the thematic analysis method which identified themes by analyzing guest comments directly without a pre-established theoretical framework. Furthermore, when applying thematic analysis where there is no pre-established theoretical framework, the coding method is an emergent coding scheme where the categories are established based on the examination of the data. While using different data analysis methods, the results presented similar items, but from two different angles. Chen McCain et al. (2022) followed the pre-determined model to categorize guest comments, the starting point is based on theory; on the other hand, this study explored the contents embedded in guest comments, and the starting point is based on genuine customer perception.
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